

# ABSTRACT OF THE DISCLOSURE

An orthogonal complex spreading method for a multichannel and an apparatus thereof are disclosed. The method includes the steps of complex-summing  $\alpha_{n1}W_{M,n1}X_{n1}$  which is obtained by multiplying an orthogonal Hadamard sequence  $W_{M,n1}$  by a first data  $X_{n1}$  of a n-th block and  $\alpha_{n2}W_{M,n2}X_{n2}$  which is obtained by multiplying an orthogonal Hadamard sequence  $W_{M,n2}$  by a second data  $X_{n2}$  of a n-th block; complex-multiplying  $\alpha_{n1}W_{M,n1}X_{n1}+j\alpha_{n2}W_{M,n2}X_{n2}$  which is summed in the complex type and  $W_{M,n3}+jPW_{M,n4}$  of the complex type using a complex multiplier and outputting as an in-phase information and quadrature phase information; and summing only in-phase information outputted from a plurality of blocks and only quadrature phase information outputted therefrom and spreading the same using a spreading code.